

**Amendments to the Specification:**

Please amend the paragraph on page 4, spanning lines 29-33 as follows:

A computer program ~~as detailed in claim 5~~ is suitable for performing the method ~~according to the invention~~ performs the above-described method, on for example a computer connected to a tomographic imaging unit. The software required for this purpose may advantageously be made available to users of tomographic imaging units on a suitable data carrier, such as a floppy disk or a CD-ROM, or over a data network (the internet) for downloading.

Please amend the paragraph on page 5, spanning lines 1-3 as follows:

A tomographic imaging unit ~~for performing the method according to the invention~~ is the subject of claim 6, under which includes a computer ~~is so set up in respect of~~ with software that ~~the making of~~ makes the diagnostic slice images takes place by the method described above.

Please amend the paragraph starting on page 5, line 25 and continuing to page 6, line 2, as follows:

~~In accordance with the invention, at~~ At least two current reference slice images 1, 1' are made. The relative positions and orientations, as symbolized by the arrow 7, of the reference slice images 1 and 1' agree in this case with the relative positions and orientations 8 of the corresponding earlier reference slice images 3, 3'. In a further step of the method according to the invention, the geometrical transformation 2 is determined in such a way that both of the current reference slice images 1, 1' are brought into agreement with the corresponding earlier reference slice images 3, 3' simultaneously. The set 4 of transformation parameters is determined automatically in this case by causing a measure of similarity that represents the similarity of the current reference slice images 1 and 1' to the earlier reference slice

images 3 and 3' corresponding thereto to be optimized by means of a suitable algorithm. The current imaging parameters 5 are then calculated on this basis.

Please amend the paragraph on page 6, spanning lines 3-7 as follows:

The method ~~according to the invention~~ may be performed by means of a tomographic imaging unit 9 that has image-making means 10. The image-making means 10 make the reference slice images 1, 1', 3, 3' and the diagnostic slice image 6, with a computer 11 belonging to the tomographic imaging unit operating the image-making means 10 and calculating the imaging parameters 5 automatically by the method described above.

On page 6, after the last paragraph ending on line 14, please add the following new paragraph:

The invention has been described with reference to the preferred embodiments. Modifications and alterations may occur to others upon reading and understanding the preceding detailed description. It is intended that the invention be construed as including all such modifications and alterations insofar as they come within the scope of the appended claims or the equivalents thereof.